

53d WEAPONS EVALUATION GROUP

The 53d WEG, headquartered at Tyndall Air Force Base, Fla., is comprised of five squadrons and two detachments: the 53d Test Support Squadron, the 81st Range Control Squadron, the 82d Aerial Targets Squadron, and the 83d Fighter Weapons Squadron, all located at Tyndall; the 86th Fighter Weapons Squadron, located at Eglin; Detachment 1, 82 ATRS, located at Holloman Air Force Base, NM, and Detachment 1, 86 FWS located at Hill Air Force Base, Utah. The group conducts the USAF air-to-air Weapon System Evaluation Program, known as Combat Archer, under COMACC Plan 85, and the USAF air-to-ground WSEP, known as Combat Hammer, under COMACC Plan 90. It also supports Weapons Instructor Course air-to-air formal training syllabi under COMACC Plan 92. Unit personnel provide all USAF aerial target support for DoD users in the gulf ranges and full-scale targets for Title 10 testing on White Sands Missile Range near Holloman. The group also plans, manages, and executes the USAF air-to-air weapons meet known as William Tell.

The **53d Test Support Squadron** is responsible to the 53d Weapons Evaluation Group for technical and staff functions in support of USAF air-to-air/ground operational test programs to include the WSEP and other DoD weapons tests. They also provide, technical, engineering, acquisition, data automation/local area network, system configuration control and strategic planning support for the 53 WEG, including program management of all gulf range air-to-air systems, range control systems, aerial targets (full-scale/subscale) systems and payloads, missile scoring and data analysis telemetry, and communications systems. It provides weapons and tactics, threat replication via emerging threat intelligence, aerial targets and electronic systems development, and plans/programs support to accomplish the 53 WEG mission.

The **81st Range Control Squadron** is responsible to the 53d Weapons Evaluation Group for all ground controlled intercept support of the USAF air-to-air Weapon System Evaluation Program. The squadron, home of “Wetstone Control,” is the only ACC range control squadron supporting operational testing and evaluation of air-to-air weapons systems against a myriad of threat-representative targets. Each year, Wetstone Control provides “World-Class GCI” support to over 35 deployed and local flying units. The squadron is instrumental in the safe, effective employment and testing of over 330 missile firings and 3,000 combat training and test sorties annually.

The **82nd Aerial Targets Squadron** operates approximately 50 full-scale QF-4 aircraft and 45 BQM-167 subscale targets to provide manned and unmanned aerial targets support for numerous USAF and DoD-directed programs. The squadron maintains three 120-foot drone recovery vessels and two smaller vessels to recover aerial targets and support range safety, patrol and salvage operations. Squadron members also operate the Air Force’s only two E-9A airborne platform/telemetry relay aircraft that provide ocean surface surveillance and relay missile/target telemetry of missiles fired in over-the-horizon profiles on the Gulf Range. The squadron executes an annual budget of \$16 million to support three O & M contracts and more than 150 contract personnel.

Detachment 1, 82d Aerial Targets Squadron operates QF-4 full-scale aerial targets for use at the White Sands Missile Range. The squadron manages all contract operations of its QF-4 fleet as part of the overall O&M contract at Tyndall. It directs USAF operations of full-scale targets in support of DoD testing programs to include the US Army's Patriot system.

The **83d Fighter Weapons Squadron** conducts the USAF Air-to-Air Weapon System Evaluation Program. The squadron evaluates the total air-to-air weapons system including aircraft, weapon delivery system, weapon, aircrew, support equipment, technical data and maintenance actions. The squadron hosts 38 A/A WSEP deployments annually at Tyndall. The annual firing of over 300 missiles evaluates all USAF air-to-air missile capabilities (AIM-120, AIM-7, AIM-9 and gun) and also provides live missile training for CAF crews as a secondary objective. Squadron personnel verify weapon system performance, determine reliability, evaluate capability and limitations, identify deficiencies, recommend corrective action, and maintain CAF-wide data. The squadron investigates missile envelopes and evaluates capabilities and limitations to determine future firing requirements. It provides liaison support for predeployment, employment and redeployment of ACC, USAFE, PACAF, ANG, USAFR, and foreign air forces participating in WSEP, William Tell, and WIC missile firing programs.

The **86th Fighter Weapons Squadron** conducts the USAF Air-to-Ground Weapon System Evaluation Program, also known as Combat Hammer. The 86th is the single DoD agency charged with conducting predictive battle damage analysis of precision guided air-to-ground munitions (PGMs) using operational weapons, aircraft, maintenance personnel and aircrews. The squadron hosts 20 to 25 evaluations at Hill and Eglin Air Force Bases, assessing weapon system performance, reliability, capabilities, and limitations in realistic combat scenarios against representative real-world targets. Combat Hammer identifies weapon system and training deficiencies and provides recommendations for corrective action to USAF leaders. Additionally, the squadron maintains the DoD's comprehensive database on PGM performance and investigates capabilities and limitations of currently fielded PGMs. The 86th evaluates each and every air-to-ground PGM and PGM-capable fighter, bomber, and unmanned aerial vehicle type in the CAF. Weapons assessed include: GBU-10, 12, 24, 27, 28, 31, 32, 38; CBU 103 and 105, EGBU-15 and AGM-130, AGM-65, 86, 88, and 154. Recent weapons and weapons systems included in A/G WSEP include Hellfire, Small Diameter Bomb and the Joint Air-to-Surface Standoff Missile as well as both F-22 Raptor and MQ-9 Reaper aircraft. A/G WSEP provides liaison support for pre-deployment, employment, and re-deployment of ACC, USAFE, PACAF, ANG and AFRES forces participating in WSEP and conducts investigative firings of air-to-ground PGMs to address CAF employment issues and support ongoing OT&E efforts.

Detachment 1, 86th Fighter Weapons Squadron provides a permanent presence at Hill Air Force Base facilitating deployments in support of the USAF Air-to-Ground Weapon System Evaluation Program, Combat Hammer. Squadron personnel provide liaison support for predeployment, employment and redeployment of ACC, USAFE, PACAF, ANG, and AFRES forces participating in A/G WSEP. A/G WSEP assesses operational

performance of fighter, bomber, and unmanned aerial vehicle weapon systems employing precision guided munitions in realistic combat scenarios against first-look targets.